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SUPPLEMENTAL GLOBAL CLIMATIC DATA: JANUARY

C. Schutz, et al

RAND Corporation

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The supplemental global distributions of sea-surface temperature, total cloud cover, planetary albedo, and outgoing long-wave radiation for January are presented as an update to all January data previously published (R-915, R-915/1). All data are presented on a global grid of 4 degree latitude and 5 degree longitude, both in the form of tabulated values and machine-analyzed maps. The corresponding zonal and global averages are also given. These data are being used at Rand as a guide for evaluating climate simulations based on the Rand version of the Mintz-Arakawa general circulation model.

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Supplemental Global Climatic Data: JANUARY

C. Schutz and W. L. Gates

A Report prepared for

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

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SANTA MONICA, CA. 90406

PREFACE

An important part of the Rand/ARPA research program on the dynamics of climate is the evaluation of the accuracy of simulations of the global climate given by numerical solutions of models of the general atmospheric circulation. To perform this evaluation systematically requires a knowledge of the global distributions of the primary climatic variables of pressure, temperature, humidity, wind, and precipitation, together with the associated distributions of global radiation elements and hydrologic balances. Such data are not readily available, and even those that are obtainable are usually in a variety of forms and not immediately comparable with other climatic data.

The data presented in this report follow the pattern of previous reports (Schutz and Gates, 1971, 1972, and 1973). In this January supplement, sea-surface temperature, total cloud cover, planetary albedo, and outgoing long-wave radiation data have been updated or added. Using the latest available data is in keeping with our objective of gathering in one place and in one format the most representative global climatologies of selected seasonal meteorological variables. A planned supplement for the quarterly data published for July will also include these new acquisitions. Except for the southern hemisphere cloud cover, which is only available for January and July, these supplementary data already appear in the publications for April and October.

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SUMMARY

The supplemental global distributions of sea-surface temperature, total cloud cover, planetary albedo, and outgoing long-wave radiation for January are presented as an update to all January data previously published (Schutz and Gates, 1971 and 1972). All data are presented on a global grid of 4° latitude and 5° longitude, both in the form of tabulated values and machine-analyzed maps. The corresponding zonal and global averages are also given. These data are being used at Rand as a guide for evaluating climate simulations based on the Rand version of the Mintz-Arakawa general circulation model.

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Sincere appreciation is extended to several Rand colleagues for their valuable assistance: R. C. Alexander for his efforts in developing the data on sea-surface temperature and ice limits at high latitudes; L. D. Bregman for completing the arduous task of extracting the basic grid-point data from the varied global climatic charts; and R. L. Mobley and A. B. Nelson for reducing these data to the desired format and supervising the machine tabulations.

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CONTENTS

1. INTRODUCTION

The supplementary January data presented here for the sea-surface temperature, conventionally observed mean total cloud cover over the southern hemisphere, planetary albedo, and outgoing long-wave radiation represent refinements and additions to data presented in Schutz and Gates (1971 and 1972). They give the results of a continuing effort to use the best climatologies available in evaluating climate simulation experiments based on numerical general circulation models, the Mintz-Arakawa model in particular. The new January data appearing in this report are summarized in Table 1.1.

Section 2 discusses the data selection and processing. Section 3 presents a global analysis of each variable selected. The corresponding distribution of the zonal averages and the global average value are given in Sec. 4, and Sec. 5 gives tabulations of the associated grid-point data. The asterisk (*) in the grid-point data tabulations (Sec. 5) denotes missing data. These regions correspond to the blank or "no data" areas on the analyzed maps and zonal averages of Secs. 3 and 4. In the sea-surface temperature data in Secs. 3 and 5, the letter "I" is used to denote the locations of sea ice.

2. DATA SELECTION AND PROCESSING

This section briefly describes the processing of manipulation of each primary source of the mean data identified in Table 1.1. After a careful review of all known sources of pertinent data, we concluded that the sources used here represent the best collection of "global" data available at present, at least for the purpose of comparison with the model's global simulations. The observational content, special processing, and limitations of these data (including various record lengths) are discussed further in the data publications themselves. Although the present discussion refers primarily to the data of Figs. 3.1 through 3.4, it also applies to the corresponding zonally averaged data of Figs. 4.1 through 4.4, as well as to the supporting grid-point data presented in Tables 5.1 through 5.4.

SEA-SURFACE TEMPERATURE

Figure 3.1 shows the global distribution of average January sea-surface temperatures. The distribution is a composite of the January normals obtained from the National Center for Atmospheric Research (Washington and Thiel, 1970) and from the Fleet Numerical Weather Central in Monterey (northern hemisphere only). The grid elements containing more than 50 percent of sea ice are denoted by "I" in Fig. 3.1. This convention introduces a bias toward more severe ice conditions. (For example, if 60 percent of an area contains ice of 60-percent concentration, only 36 percent of the area is actually covered by ice.) This practice may partly compensate for the usual bias in the data toward calm, warm weather and ice-free conditions when ships can operate. These data on the 4°-latitude, 5°-longitude grid were taken from the appropriate points (without smoothing) of the global 1° tabulation being prepared by Alexander and Mobley (1973). These authors also give details on interpolation, merging of data sets, and treatment of ice limits.

Table 1.1

IDENTIFICATION OF SELECTED CLIMATIC VARIABLES FOR JANUARY

Data or Variable	Unit	Source	Maximum Record Period	Pages[a]
Temperature (sea surface)	deg C	Alexander and Mobley (1973)	Various	9, 15, 21
Cloudiness	Tenths	Environmental Technical Applications Center (1971) Van Loon et al. (1972)	1963-1968 Various	10, 16, 25
Albedo (planetary)	Fractions	Vonder Haar (1972)	1963-1966 and 1969-1970	11, 17, 29
Outgoing long-wave radiation	10^2 ly/day^{-1}	Vonder Haar (1972)	1963-1966 and 1969-1970	12, 18, 33

[a]The numbers in this column are the page numbers in this report of the global map analyses, the zonally averaged data, and the global data tabulations, respectively.

TOTAL CLOUD COVER

The distribution of total cloud cover shown in Fig. 3.2 was developed separately for the northern and southern hemispheres. The northern hemisphere portion appeared in the original January report (Schutz and Gates, 1971), and was constructed from the digitized representation of both satellite and conventional observations compiled by the Global Weather Central (GWC) for the Environmental Technical Applications Center (1971). These data were collected at 0000Z and 1200Z and were compiled for this presentation in terms of the total cloud cover C from the formula

$$C = \sum_{N=0}^{8} \frac{C_{00,N} + C_{12,N}}{2} \frac{N}{8},$$

where $C_{00,N}$ and $C_{12,N}$ are the percentages of the 00Z and 12Z observations that have N-eighths cloud cover. These digitized cloud data appear on the GWC grid. This is a square grid with octagonal boundaries superimposed on a polar stereographic projection, with a southern boundary at approximately 15°N. Equations from Murray (1962) were used to transform the latitude and longitude of each of the 46 × 72 points of the present grid to the coordinates in the GWC grid, followed by a bilinear interpolation using the four nearest GWC grid values.

Since the northern hemisphere data of Fig. 3.2 contain all modern cloud observations, during both day and night hours, they are considered the best available representation of northern hemisphere total cloud cover. In an effort to obtain global coverage, however, the climatological composite of total cloudiness for the southern hemisphere in January from van Loon et al. (1972) was added. It is a subjective fusion of the total cloudiness as discussed by Brooks (1927), Landsberg (1945), Vowinckel and van Loon (1957), Clapp (1964), and Sadler (1969), and shown in the marine climatological atlases of Germany, the Netherlands, the United Kingdom, and the United States. Since it shows many of the better-known features of the total cloud cover, such as the zones of high mean cloudiness over the eastern parts of the oceans in the tropics, it is probably a reasonably good picture of the total cloudiness.

PLANETARY ALBEDO

The December-January-February mean planetary (world) albedo values shown in Fig. 3.3 were summarized from satellite data during the periods including December-January-February 1963/1964, 1964/1965, December 1966, and January 20, 1969, through February 3, 1970. These data, the most up-to-date available, were reduced at Colorado State University into seasonal global maps as discussed by Vonder Haar (1972). They were transcribed directly onto the 4°-latitude, 5°-longitude grid for this report.

OUTGOING LONG-WAVE RADIATION

The December-January-February outgoing long-wave radiation data shown in Fig. 3.4 were also interpolated directly onto the 4°-latitude, 5°-longitude grid from the data of Vonder Haar (1972). These measurements cover the same periods as do the planetary albedo data.

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3. GLOBAL CLIMATIC ANALYSES

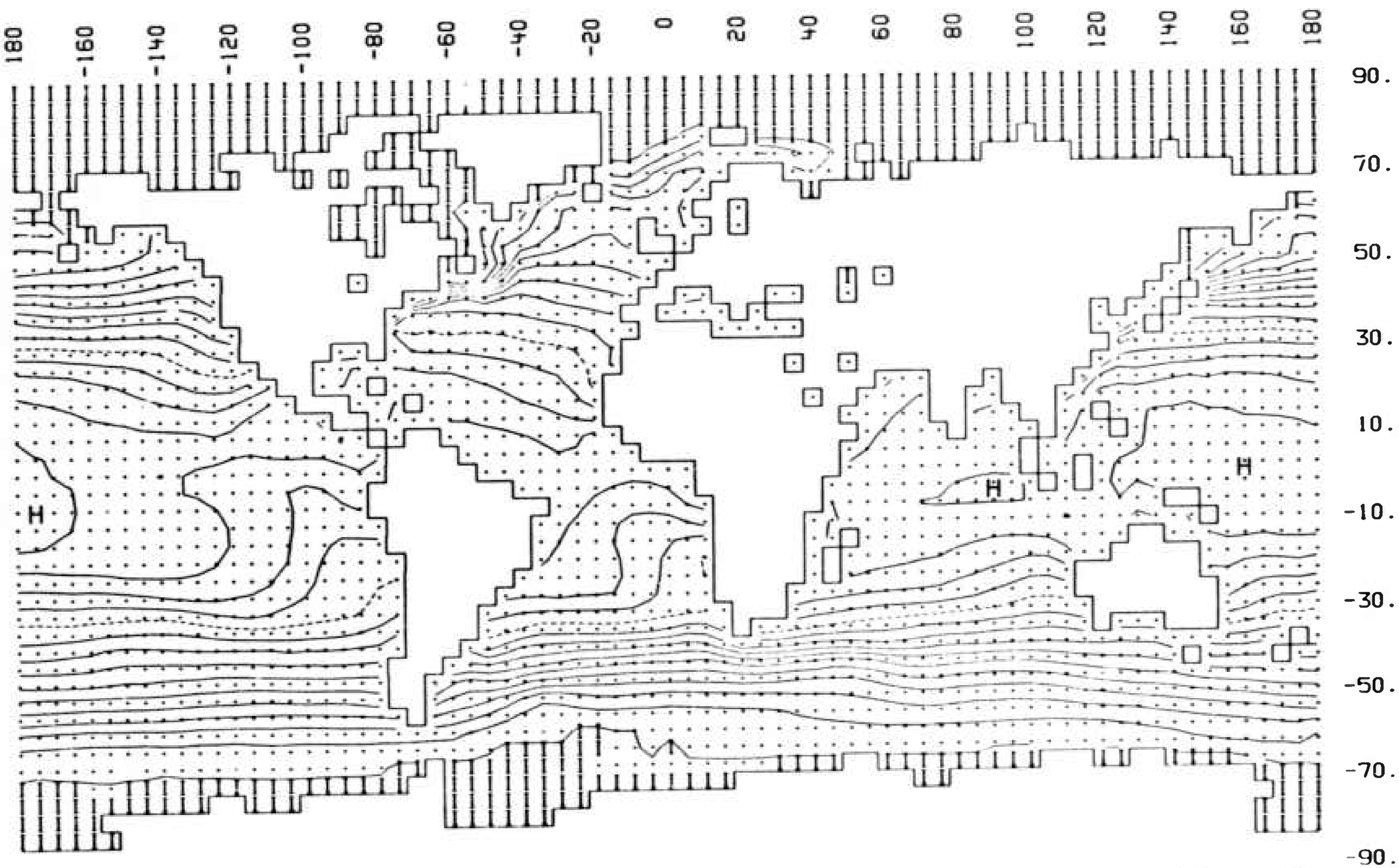

Fig. 3.1--January mean sea-surface temperature in deg C. The analysis interval is 2 deg, and the 20 deg C isotherm is dashed. "I" denotes grid elements with sea ice. Interpolated from a composite of normals formed in Alexander and Mobley (1973)

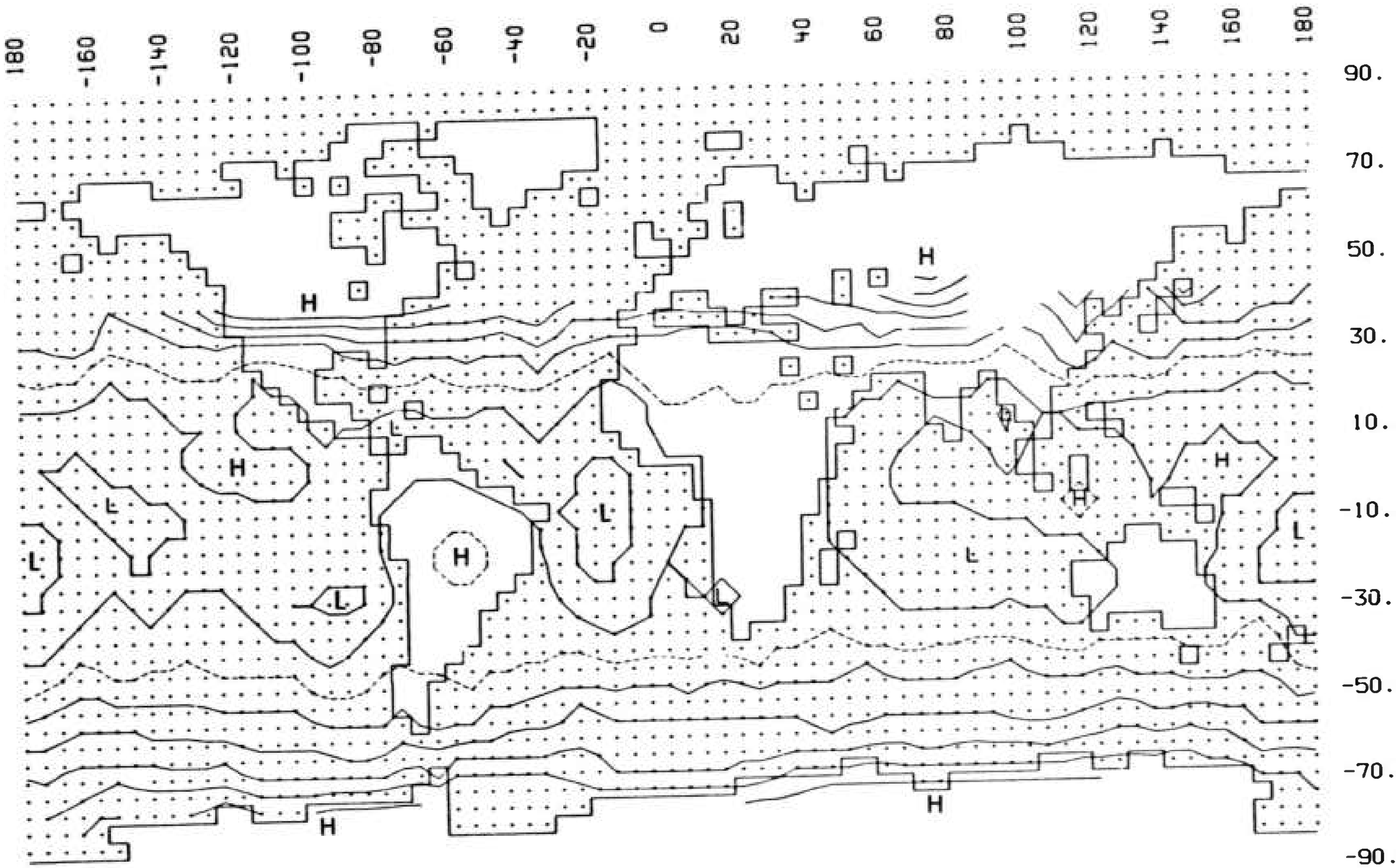

Fig. 3.3--December-January-February mean planetary (world) albedo (fractions). The analysis interval is 0.05, and the 0.3 isoline is dashed. Data are from Vonder Haar (1972)

4. ZONALLY AVERAGED DATA

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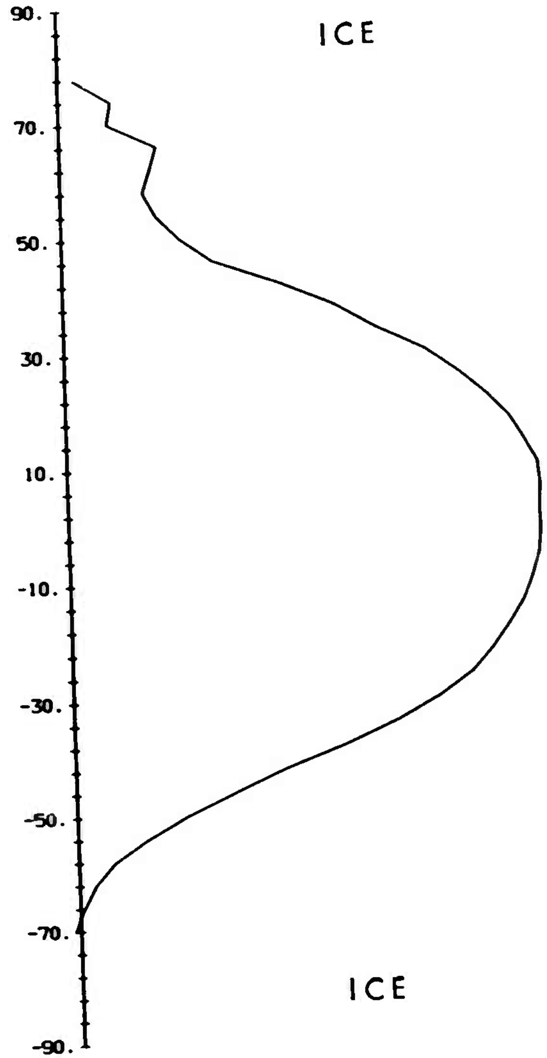
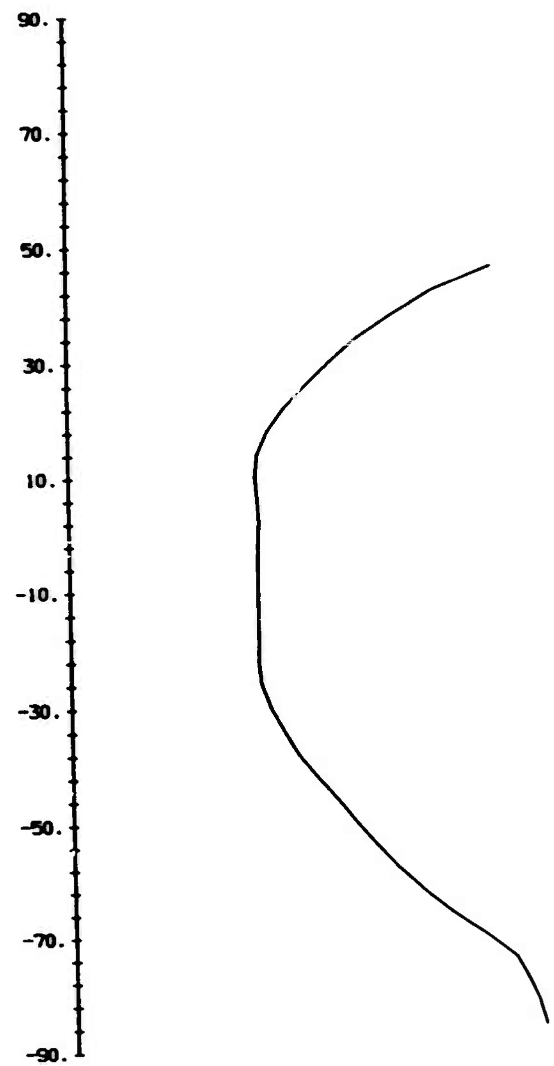


GLOBAL MEAN= 18.476

LAT	ZONAL MEAN
90.	
86.	
82.	
78.	0.836
74.	3.011
70.	2.775
66.	5.549
62.	5.169
58.	4.738
54.	5.461
50.	6.792
46.	8.644
42.	12.364
38.	15.588
34.	17.875
30.	20.654
26.	22.568
22.	24.156
18.	25.415
14.	26.244
10.	26.988
6.	27.127
2.	27.064
-2.	27.096
-6.	26.976
-10.	26.557
-14.	26.022
-18.	25.190
-22.	24.188
-26.	22.950
-30.	21.010
-34.	18.563
-38.	15.550
-42.	12.145
-46.	9.266
-50.	6.414
-54.	4.079
-58.	2.123
-62.	0.932
-66.	0.216
-70.	-0.299
-74.	
-78.	
-82.	
-86.	
-90.	

Fig. 4.1--January zonally averaged mean sea-surface temperature in deg C, as found from the data of Fig. 3.1



GLOBAL MEAN= 0.302

LAT	ZONAL MEAN
90.	
86.	
82.	
78.	
74.	
70.	
66.	
62.	
58.	
54.	
50.	
46.	0.542
42.	0.466
38.	0.416
34.	0.371
30.	0.336
26.	0.306
22.	0.277
18.	0.256
14.	0.242
10.	0.240
6.	0.242
2.	0.244
-2.	0.242
-6.	0.241
-10.	0.242
-14.	0.241
-18.	0.241
-22.	0.241
-26.	0.243
-30.	0.255
-34.	0.272
-38.	0.289
-42.	0.3[illegible]3
-46.	0.338
-50.	0.363
-54.	0.388
-58.	0.415
-62.	0.445
-66.	0.482
-70.	0.525
-74.	0.562
-78.	0.578
-82.	0.591
-86.	0.600
-90.	

Fig. 4.3--December-January-February zonally averaged mean planetary albedo, in fractions, as found from the data of Fig. 3.3

5. GLOBAL DATA TABULATIONS

TABLE 5-I JAN SEA SURFACE TEMPERATURE (DEG C)

	180W	175W	170W	165W	160W	155W	150W	145W	140W	135W	130W	125W	120W	115W	110W	105W	100W	95W
90N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
86N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
82N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
78N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
74N	I	I	I	I	I	I	I	I	I	I	I	I	***	***	***	I	***	***
70N	I	I	I	I	***	***	***	***	I	I	I	I	I	***	***	***	I	***
66N	***	***	I	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
62N	-0.7	I	I	I	***	***	***	***	***	***	***	***	***	***	***	***	***	***
58N	2.3	2.1	1.9	I	I	***	4.8	5.4	6.3	***	***	***	***	***	***	***	***	***
54N	4.4	4.4	4.2	***	4.4	4.4	4.7	5.5	6.4	7.3	***	***	***	***	***	***	***	***
50N	5.0	5.2	5.6	5.8	5.9	6.1	6.5	7.0	7.6	8.1	8.7	***	***	***	***	***	***	***
46N	8.2	8.4	8.4	8.2	8.4	8.5	8.8	9.3	9.9	10.3	10.7	10.2	***	***	***	***	***	***
42N	12.2	12.1	11.6	11.3	11.3	11.3	11.5	12.1	12.5	12.8	12.6	11.5	***	***	***	***	***	***
38N	15.8	15.3	14.9	14.7	14.8	15.1	15.3	15.5	15.5	15.6	14.9	13.5	***	***	***	***	***	***
34N	18.2	18.1	18.0	17.9	17.7	17.9	17.9	17.9	18.0	17.7	16.8	15.7	15.2	***	***	***	***	***
30N	21.2	21.3	21.3	21.0	20.8	20.7	20.5	20.6	20.0	19.2	18.5	17.6	17.1	***	***	***	***	***
26N	23.8	23.7	23.6	23.5	23.2	22.9	22.6	22.2	21.5	20.8	19.9	19.4	19.2	19.9	***	***	***	22.6
22N	25.5	25.3	25.3	25.1	24.6	24.3	23.9	23.4	22.9	22.3	21.6	21.4	21.5	22.6	23.9	***	***	23.0
18N	26.5	26.2	26.0	25.8	25.4	25.1	24.8	24.5	24.2	23.9	23.6	23.4	23.9	25.1	26.0	27.0	***	***
14N	27.4	26.9	26.6	26.4	26.2	26.1	25.9	25.6	25.4	25.3	25.2	25.0	25.5	26.4	27.2	27.8	27.1	25.5
10N	28.0	27.5	27.7	27.2	26.9	26.9	26.9	26.6	26.6	26.7	26.7	26.2	26.6	26.9	27.1	27.3	27.1	26.8
6N	28.4	28.1	27.9	27.5	27.1	26.7	26.5	26.5	26.3	26.5	26.4	26.4	26.0	25.8	26.1	26.2	26.1	26.1
2N	28.4	28.3	28.0	27.9	27.4	26.9	26.5	26.2	26.0	26.1	25.7	25.5	25.0	24.9	24.4	24.6	24.6	24.8
2S	28.5	28.5	28.3	28.1	27.7	27.4	27.1	26.7	26.3	26.1	25.9	25.6	25.2	25.0	24.7	24.0	23.6	23.8
6S	28.5	28.5	28.4	28.1	27.8	27.6	27.5	27.3	27.0	26.7	26.4	26.1	25.7	25.3	25.0	24.3	23.4	22.9
10S	28.5	28.5	28.3	28.0	27.7	27.6	27.6	27.6	27.6	27.3	27.0	26.3	25.9	25.4	24.8	24.3	23.3	22.5
14S	28.3	28.2	27.9	27.6	27.5	27.4	27.4	27.4	27.4	27.2	26.9	26.3	26.0	25.2	24.7	24.2	23.2	22.2
18S	26.6	26.6	26.7	26.7	26.8	26.8	26.9	26.9	26.8	26.7	26.4	26.1	25.6	24.9	24.5	24.0	22.9	21.9
22S	24.3	24.9	25.0	25.2	25.1	25.4	25.6	25.7	25.7	25.8	25.7	25.4	24.9	24.5	24.2	23.4	22.4	21.7
26S	22.8	22.7	22.9	22.9	22.8	22.8	23.0	23.3	23.7	23.9	24.1	24.1	23.9	23.8	23.2	22.6	21.9	21.3
30S	20.8	20.7	20.9	20.9	20.6	20.6	20.4	20.3	20.3	20.6	21.1	21.7	22.0	22.2	21.8	21.3	20.8	20.5
34S	18.8	18.8	18.8	18.7	18.4	18.1	18.0	17.9	17.8	18.0	18.2	18.7	19.0	19.2	19.2	19.1	19.0	18.8
38S	17.1	17.1	16.9	16.5	16.3	15.7	15.5	15.6	15.7	15.8	16.0	16.0	16.0	16.0	16.0	16.3	16.1	16.1
42S	14.6	14.6	14.5	14.4	14.2	13.8	13.6	13.5	13.5	13.4	13.4	13.2	13.3	13.4	13.6	13.7	13.7	13.7
46S	12.2	12.3	12.4	12.3	12.2	11.9	11.7	11.7	11.5	11.3	11.2	11.0	10.9	10.9	11.0	11.1	11.2	11.2
50S	9.6	9.5	9.4	9.3	9.2	9.2	9.1	9.1	9.0	8.8	8.7	8.6	8.5	8.3	8.2	8.4	8.5	8.4
54S	6.9	6.9	6.8	6.6	6.5	6.4	6.3	6.4	6.3	6.1	5.8	5.7	5.7	5.5	5.5	5.4	5.5	5.6
58S	3.6	3.4	3.2	3.1	2.9	3.0	3.0	2.9	3.1	3.1	2.8	2.8	2.7	2.8	2.9	2.8	2.8	2.9
62S	1.4	1.4	1.3	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.3	1.3	1.2	1.2
66S	0.7	0.3	0.5	0.6	0.6	0.7	0.6	0.5	0.2	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5
70S	I	I	I	I	-0.3	-0.3	I	I	I	I	I	I	I	I	I	I	I	I
74S	I	I	I	I	I	I	I	I	I	I	I	***	***	I	I	I	***	***
78S	I	I	I	I	I	***	***	***	***	***	***	***	***	***	***	***	***	***
82S	I	I	I	I	I	I	***	***	***	***	***	***	***	***	***	***	***	***
86S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
90S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

TABLE 5-1 JAN SEA SURFACE TEMPERATURE (DEG C)

	90W	85W	80W	75W	70W	65W	60W	55W	50W	45W	40W	35W	30W	25W	20W	15W	10W	5W
90N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
86N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	:
82N	I	***	***	***	***	I	***	***	***	***	***	***	***	***	***	I	I	I
78N	***	***	***	I	I	***	***	***	***	***	***	***	***	***	***	I	I	I
74N	***	***	I	I	I	I	I	***	***	***	***	***	***	***	***	I	I	0.3
70N	I	***	***	***	***	I	I	I	***	***	***	***	***	I	I	1.8	1.4	3.5
66N	***	***	I	I	***	***	I	I	***	***	***	I	5.7	5.7	***	5.7	4.9	5.4
62N	I	I	I	***	I	I	I	1.0	0.5	***	2.5	5.9	7.6	8.6	8.8	8.5	8.0	7.8
58N	I	I	I	***	***	***	I	-0.2	2.4	4.4	5.2	6.7	7.9	8.8	9.6	9.8	9.2	***
54N	***	***	I	***	***	***	***	I	2.1	6.0	7.0	8.2	9.2	10.1	10.5	10.5	9.7	***
50N	***	***	***	***	***	***	I	***	1.1	4.8	11.0	11.8	11.8	11.8	11.9	11.6	11.1	10.1
46N	***	3.6	***	***	***	***	5.7	4.7	3.8	10.6	14.0	14.1	13.9	13.6	13.2	13.0	12.5	11.8
42N	***	***	***	***	9.5	12.7	15.6	16.0	15.0	15.9	16.6	16.0	15.5	15.1	14.7	14.4	13.9	***
38N	***	***	***	13.6	20.0	19.4	18.8	18.8	18.6	18.3	18.0	17.6	17.2	16.[illegible]	16.4	16.0	***	***
34N	***	***	***	22.0	19.9	20.1	19.8	20.0	20.0	19.8	19.4	19.1	18.9	18.5	17.9	17.4	16.6	***
30N	21.2	20.7	***	22.6	22.0	21.9	21.9	21.7	21.4	21.3	20.9	20.6	20.3	19.9	19.1	18.0	***	***
26N	23.2	24.5	24.6	24.1	23.8	23.6	23.6	23.4	23.0	22.6	22.3	21.9	21.6	20.8	19.6	17.8	***	***
22N	23.6	25.8	***	25.5	25.5	25.1	25.0	24.4	24.1	23.7	23.3	22.8	22.4	21.4	19.6	***	***	***
18N	***	26.2	26.6	26.0	***	25.8	25.6	25.3	24.9	24.5	24.0	23.7	23.2	22.4	21.1	***	***	***
14N	***	***	26.6	25.6	25.5	25.5	26.0	26.0	25.7	25.5	25.0	24.7	24.3	23.9	23.6	***	***	***
10N	25.9	27.7	***	26.1	***	***	26.2	26.5	26.4	26.4	26.1	25.8	25.5	25.6	26.6	26.7	***	***
6N	26.5	27.3	26.3	***	***	***	***	26.4	27.0	27.0	26.9	26.5	26.1	26.3	26.9	27.0	27.2	***
2N	25.3	25.7	24.8	***	***	***	***	***	27.0	27.1	27.1	26.8	26.2	26.3	26.6	26.6	26.8	26.9
2S	24.6	24.5	***	***	***	***	***	***	***	***	27.2	27.1	27.0	26.8	26.4	25.9	25.5	25.6
6S	23.6	24.1	***	***	***	***	***	***	***	***	***	***	27.0	26.5	25.4	24.8	24.4	24.5
10S	22.4	22.7	22.5	***	***	***	***	***	***	***	***	27.1	26.5	25.7	25.0	24.2	23.6	23.3
14S	21.8	21.6	21.8	***	***	***	***	***	***	***	***	26.8	26.0	25.3	24.7	24.0	23.4	22.7
18S	21.5	21.2	20.9	21.3	***	***	***	***	***	***	***	26.2	25.7	25.1	24.7	24.2	23.6	22.5
22S	21.3	21.0	20.2	20.0	***	***	***	***	***	***	25.5	25.4	25.3	24.8	24.5	24.2	23.7	22.5
26S	21.0	20.5	19.7	19.0	***	***	***	***	***	24.4	24.1	24.1	24.3	24.0	24.0	24.0	23.3	22.3
30S	20.3	19.9	18.9	18.1	***	***	***	***	22.7	22.3	21.9	21.8	21.6	21.7	21.7	21.6	21.6	21.[illegible]
34S	18.5	18.0	17.5	16.2	***	***	***	***	20.9	20.4	19.6	18.7	18.8	18.8	19.0	19.0	18.8	18.[illegible]
38S	16.0	15.7	15.5	14.7	***	***	***	16.5	18.5	17.1	15.7	15.4	15.1	14.8	14.7	14.6	14.4	13.9
42S	13.7	13.6	13.4	***	***	***	14.0	13.6	13.9	13.2	12.6	12.0	11.5	10.8	10.6	10.3	9.9	9.7
46S	11.2	11.0	11.1	***	***	12.6	10.3	9.1	9.8	9.6	8.4	7.4	7.2	6.9	6.7	6.6	6.5	6.5
50S	8.5	8.9	9.3	***	***	9.1	7.6	7.1	6.4	5.2	3.9	2.4	2.6	3.2	3.7	3.8	3.6	3.4
54S	5.8	5.8	6.0	6.3	***	5.9	5.2	4.6	3.7	2.6	1.6	1.1	1.1	1.2	1.3	1.3	1.2	1.3
58S	3.0	3.0	2.9	2.9	2.8	2.8	2.6	1.9	1.0	0.8	0.8	0.8	0.8	I	I	-0.0	-0.0	0.5
62S	1.2	1.2	1.1	1.1	1.0	0.9	0.9	0.6	0.2	I	I	I	I	I	I	-0.4	-0.2	0.4
66S	0.4	0.4	0.3	I	I	***	I	I	I	I	I	I	I	I	-0.5	-0.5	-0.4	-0.3
70S	I	I	I	I	***	***	I	I	I	I	I	I	I	I	I	I	I	I
74S	***	***	***	***	***	***	I	I	I	I	I	I	I	I	***	***	***	***
78S	***	***	***	***	***	***	I	I	I	I	I	I	***	***	***	***	***	***
82S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
86S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
90S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

TABLE 5-1 JAN SEA SURFACE TEMPERATURE (DEG C)

	0E	5E	10E	15E	20E	25E	30E	35E	40E	45E	50E	55E	60E	65E	70E	75E	80E	85E
90N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
86N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
82N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
78N	I	0.3	1.4	*	*	I	I	I	I	I	I	I	I	I	I	I	I	I
74N	1.8	3.2	4.8	5.3	5.2	4.5	3.8	2.6	1.4	0.3	I	*	I	I	I	I	I	I
70N	5.3	6.7	6.5	4.2	*	*	*	-1.1	0.4	-1.0	I	I	*	I	*	*	*	*
66N	6.5	6.3	4.2	*	*	*	*	*	I	*	*	*	*	*	*	*	*	*
62N	7.4	5.5	*	*	0.8	*	*	*	*	*	*	*	*	*	*	*	*	*
58N	6.6	6.0	2.1	*	2.2	*	*	*	*	*	*	*	*	*	*	*	*	*
54N	*	4.3	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
50N	9.1	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
46N	*	*	*	*	*	*	*	*	*	*	I	*	8.7	*	*	*	*	*
42N	*	13.6	13.8	*	*	*	9.4	10.8	*	*	12.2	*	*	*	*	*	*	*
38N	14.5	14.7	14.8	15.2	*	16.0	*	*	*	*	*	*	*	*	*	*	*	*
34N	*	*	*	15.9	16.8	16.9	17.2	18.5	*	*	*	*	*	*	*	*	*	*
30N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
26N	*	*	*	*	*	*	*	23.9	*	*	22.7	*	*	*	*	*	*	*
22N	*	*	*	*	*	*	*	*	*	*	*	*	23.6	24.4	25.0	*	*	*
18N	*	*	*	*	*	*	*	*	25.9	*	*	24.2	[illegible]	25.3	26.1	*	*	25.2
14N	*	*	*	*	*	*	*	*	*	*	24.9	24.9	25.5	26.3	27.0	*	*	26.1
10N	*	*	*	*	*	*	*	*	*	*	*	25.5	26.1	26.9	27.3	27.2	*	26.9
6N	*	*	*	*	*	*	*	*	*	*	25.3	26.0	26.7	27.3	27.3	27.3	27.2	27.4
2N	27.3	27.6	*	*	*	*	*	*	*	*	26.3	26.7	27.2	27.3	27.3	27.3	27.6	27.8
2S	26.1	27.0	*	*	*	*	*	*	*	27.2	27.1	27.3	27.3	27.4	27.5	27.8	28.1	28.1
6S	24.9	25.9	26.5	*	*	*	*	*	*	28.0	27.5	27.5	27.6	27.8	28.0	28.1	28.1	28.1
10S	23.3	23.9	24.7	*	*	*	*	*	27.2	28.2	27.8	27.9	27.9	27.9	27.9	27.7	27.5	27.4
14S	22.2	21.6	21.0	*	*	*	*	*	27.5	28.2	*	27.4	27.3	27.2	27.0	26.8	26.6	26.4
18S	21.7	21.0	19.8	*	*	*	*	*	28.0	*	27.0	26.9	26.6	26.5	26.3	26.1	25.6	25.1
22S	21.5	20.8	20.0	*	*	*	*	*	26.6	*	26.2	25.9	25.7	25.5	25.2	24.9	24.5	24.1
26S	21.3	20.7	20.3	*	*	*	*	25.3	25.0	24.8	24.4	24.2	24.0	23.9	23.8	23.6	23.2	22.7
30S	20.7	20.4	20.0	19.6	*	*	*	23.4	22.9	22.5	22.1	21.7	21.5	21.4	21.3	21.1	20.7	20.4
34S	18.0	17.1	17.2	18.7	*	21.5	21.2	20.6	20.1	19.7	19.3	19.0	18.8	18.6	18.0	17.8	17.8	17.5
38S	13.6	13.1	13.5	15.2	17.5	16.8	16.7	16.1	15.4	15.3	15.2	15.6	15.9	15.6	15.2	14.7	14.5	14.6
42S	9.8	9.6	9.3	10.1	10.8	11.2	10.7	10.2	9.9	9.2	9.3	9.8	10.5	11.1	11.3	11.0	10.8	10.6
46S	6.5	6.5	6.6	6.7	6.9	6.8	6.6	6.3	6.1	6.0	6.0	6.4	7.2	8.0	8.3	[illegible]	7.8	7.6
50S	3.1	3.2	3.4	3.4	3.6	3.6	3.7	3.8	3.9	3.9	4.1	4.3	4.7	5.1	5.5	5.4	5.1	4.9
54S	1.2	1.3	1.4	1.5	1.6	1.6	1.9	2.2	2.4	2.6	2.8	3.1	3.2	3.4	3.5	3.5	3.4	3.2
58S	0.7	0.8	1.0	1.0	1.1	1.1	1.2	1.2	1.4	1.5	1.6	1.7	1.8	1.8	1.8	1.7	1.7	1.7
62S	I	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.8	0.7	0.6
66S	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	I	I	I	I	*	*	I	I	I	I	I	I
70S	I	I	I	I	*	*	*	*	*	*	*	*	*	*	I	I	*	*
74S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
78S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
82S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
86S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
90S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

TABLE 5-1 JAN SEA SURFACE TEMPERATURE (DEG C)

	90E	95E	100E	105E	110E	115E	120E	125E	130E	135E	140E	145E	150E	155E	160E	165E	170E	175E
90N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
86N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
82N	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
78N	I	I	***	I	I	I	I	I	I	I	I	I	I	I	:	I	I	I
74N	***	***	***	***	***	I	I	I	I	I	***	I	I	I	I	I	I	I
70N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	I	I	I	I
66N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
62N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	I
58N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	0.7	2.3	2.6
54N	***	***	***	***	***	***	***	***	***	***	***	I	-1.2	-1.1	***	2.8	3.3	4.1
50N	***	***	***	***	***	***	***	***	***	***	***	I	-0.8	0.8	1.9	3.1	3.2	4.4
46N	***	***	***	***	***	***	***	***	***	***	2.6	I	1.3	3.4	5.2	6.3	6.5	7.6
42N	***	***	***	***	***	***	***	***	***	4.8	6.7	***	8.6	10.2	10.2	11.3	11.8	12.1
38N	***	***	***	***	***	***	3.5	***	12.4	11.1	***	15.8	16.2	15.8	15.8	15.7	15.8	15.6
34N	***	***	***	***	***	***	7.7	12.1	16.6	***	18.6	18.8	18.8	18.8	18.8	19.0	18.9	18.5
30N	***	***	***	***	***	***	***	19.5	21.0	21.0	20.9	21.0	21.1	21.5	21.6	21.7	21.6	21.4
26N	***	***	***	***	***	***	19.8	22.9	22.8	23.1	23.4	23.6	23.8	24.2	24.2	24.2	24.0	23.8
22N	24.8	***	***	***	***	20.8	24.6	25.4	25.0	25.4	25.8	26.0	25.8	26.3	26.3	26.1	25.9	25.6
18N	25.4	***	***	***	23.5	24.4	26.6	26.8	26.9	27.3	27.5	27.8	27.3	27.3	27.2	27.1	26.9	26.6
14N	26.5	26.7	***	***	24.8	26.1	***	27.3	27.8	28.1	28.2	28.2	28.1	28.0	27.9	27.8	27.6	27.5
10N	27.2	27.3	26.5	***	25.4	26.6	26.9	***	27.8	28.3	28.3	28.4	28.5	28.6	28.3	28.4	28.5	28.3
6N	27.5	27.7	***	26.2	26.2	26.8	27.5	27.7	27.8	28.4	28.6	28.8	28.9	29.1	28.7	28.8	29.0	28.8
2N	27.9	27.9	***	26.9	26.9	***	27.7	28.1	28.5	29.0	29.3	29.4	29.4	29.6	29.0	28.6	28.8	28.7
2S	28.1	28.1	28.0	***	27.4	***	27.8	28.2	28.0	28.3	29.0	29.3	29.4	29.7	29.2	28.8	28.7	28.6
6S	28.1	28.1	28.0	27.9	27.7	27.7	28.0	28.0	27.3	27.5	***	***	29.4	29.3	29.0	28.9	28.7	28.6
10S	27.3	27.3	27.3	27.6	28.1	27.9	27.2	26.9	25.5	26.1	27.0	28.3	***	29.0	29.0	28.6	28.5	28.5
14S	26.1	25.9	26.0	26.2	26.9	27.8	26.9	26.5	***	***	26.1	27.5	27.9	28.3	28.3	28.0	28.3	28.3
18S	24.8	24.6	24.2	24.3	25.4	27.1	27.7	***	***	***	***	***	27.2	27.0	26.5	26.6	26.8	26.9
22S	23.7	23.0	22.4	22.4	23.2	***	***	***	***	***	***	***	25.8	25.9	25.5	24.9	24.9	25.1
26S	22.0	21.4	20.9	20.8	21.2	***	***	***	***	***	***	***	***	24.9	24.0	23.3	23.1	23.1
30S	20.1	19.6	19.0	18.9	19.2	19.3	***	***	***	***	***	***	***	23.4	22.7	21.6	21.1	21.1
34S	17.1	16.9	16.7	16.5	16.8	17.5	***	16.8	16.8	16.9	***	***	***	20.7	20.2	19.6	19.0	19.2
38S	14.4	14.2	14.1	14.1	14.3	14.5	14.5	14.3	14.4	14.5	15.3	16.4	17.0	17.3	17.2	16.6	16.6	***
42S	10.4	10.5	10.5	10.8	11.2	11.5	11.7	11.9	12.0	12.4	13.0	***	14.3	14.2	14.0	14.1	***	14.6
46S	7.4	7.4	7.5	7.7	8.1	8.6	9.1	9.4	9.7	9.9	10.1	10.8	11.2	11.4	11.5	11.6	11.7	12.0
50S	4.9	4.8	4.8	5.0	5.3	5.9	6.2	6.5	6.9	7.0	7.3	7.7	8.1	8.4	8.7	9.0	9.4	9.5
54S	3.1	3.0	3.2	3.1	3.3	3.5	3.6	3.9	4.0	4.4	4.7	4.9	5.2	5.5	5.7	6.0	6.3	6.6
58S	1.6	1.5	1.4	1.4	1.4	1.4	1.5	1.8	2.1	2.4	2.5	2.9	3.1	3.2	3.4	3.7	4.0	4.1
62S	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.4	0.5	1.2	1.6	1.8	2.0	2.1	2.5	2.4	2.7
66S	I	I	I	***	***	***	I	:	***	***	I	I	I	I	-0.0	0.2	0.5	0.5
70S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	I	I	:
74S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	I	I
78S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	I	I	I
82S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	I	I	I
86S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
90S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

TABLE 5-2 — JAN TOTAL CLOUD COVER (TENTHS)

	180W	175W	170W	165W	160W	155W	150W	145W	140W	135W	130W	125W	120W	115W	110W	105W	100W	95W
90N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4
78N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
74N	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
70N	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
66N	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3
62N	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4
58N	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5
54N	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.5	0.5
50N	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.5
46N	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.7	0.6	0.6	0.6
42N	0.8	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.5	0.5	0.5
38N	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.5	0.5
34N	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.4	0.4	0.6
30N	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.4	0.3	0.3	0.4	0.5	0.6
26N	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.5	0.4	0.4	0.4	0.6	0.7
22N	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.6	0.7
18N	0.3	0.2	0.2	0.2	0.4	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.4	0.6
14N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
10N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2S	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6S	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6
10S	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6
14S	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6
18S	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6
22S	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.6
26S	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
30S	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
34S	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
38S	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
42S	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
46S	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
50S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
54S	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7
58S	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
62S	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
66S	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
70S	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
74S	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	[illegible]	0.8	0.8	0.7	0.7
78S	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6
82S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
86S	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
90S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

TABLE 5-2 — JAN TOTAL CLOUD COVER (TENTHS)

	90W	85W	80W	75W	70W	65W	60W	55W	50W	45W	40W	35W	30W	25W	20W	15W	10W	5W
90N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82N	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
78N	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
74N	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
70N	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8
66N	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8
62N	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8
58N	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7
54N	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
50N	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
46N	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7
42N	0.6	0.7	0.7	0.7	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6
38N	0.6	0.6	0.6	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.5
34N	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.4
30N	0.6	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.4	0.3
26N	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.3
22N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3
18N	0.5	0.6	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3
14N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
10N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
6N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
2N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
2S	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
6S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5
10S	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5
14S	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6
18S	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.6
22S	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
26S	0.5	0.6	0.6	0.6	0.5	0.3	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
30S	0.5	0.6	0.6	0.6	0.4	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
34S	0.5	0.5	0.6	0.5	0.4	0.3	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
38S	0.6	0.6	0.6	0.6	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6
42S	0.6	0.6	0.6	0.7	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6
46S	0.7	0.6	0.7	0.7	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
50S	0.7	0.7	0.7	0.7	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
54S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9
58S	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
62S	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
66S	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8
70S	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.7
74S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5
78S	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
82S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86S	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
90S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

TABLE 5-2 — JAN TOTAL CLOUD COVER (TENTHS)

	0E	5E	10E	15E	20E	25E	30E	35E	40E	45E	50E	55E	60E	65E	70E	75E	80E	85E
90N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82N	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78N	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
74N	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
70N	0.8	0.8	0.8	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6
66N	0.8	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6
62N	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
58N	0.7	0.8	0.7	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
54N	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6
50N	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5
46N	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5
42N	0.6	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.4
38N	0.4	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5
34N	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4
30N	0.3	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2
26N	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2
22N	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.4	0.3	0.2	0.1	0.2	0.2	0.2
18N	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3
14N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
10N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2S	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6S	0.5	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	[illegible]
10S	0.5	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
14S	0.6	0.6	0.6	0.4	0.4	0.5	0.6	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
18S	0.6	0.6	0.6	0.4	0.4	0.5	0.5	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
22S	0.5	0.6	0.6	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5
26S	0.5	0.5	0.6	0.5	0.3	0.4	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5
30S	0.5	0.5	0.5	0.5	0.2	0.3	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
34S	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
38S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
42S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
46S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
50S	0.8	0.8	0.8	0.8	0.8	0.8	0.8	[illegible]	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
54S	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
58S	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
62S	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8
66S	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.8
70S	0.7	0.7	0.6	0.6	[illegible]	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
74S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
78S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
90S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

TABLE 5-2 — JAN TOTAL CLOUD COVER (TENTHS)

	90E	95E	100E	105E	110E	115E	120E	125E	130E	135E	140E	145E	150E	155E	160E	165E	170E	175E
90N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5
78N	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
74N	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6
70N	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6
66N	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.7	0.7
62N	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7
58N	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.8
54N	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.7	0.6	0.7	0.8	0.8
50N	0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.7	0.7	0.7	0.7	0.8	0.8
46N	0.4	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.6	0.7	0.8	0.8	0.8	0.8	0.8	0.8
42N	0.4	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.8	0.6	0.7	0.8	0.8	0.8	0.8	0.8
38N	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.5	0.7	0.6	0.6	0.8	0.8	0.8	0.7	0.7	0.7
34N	0.4	0.5	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.8	0.7	0.7	0.7	0.7	0.7
30N	0.3	0.5	0.3	0.8	0.8	0.7	0.6	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
26N	0.2	0.4	0.3	0.7	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5
22N	0.2	0.4	0.6	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5
18N	0.3	0.4	0.4	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4
14N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
10N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2S	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
6S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
10S	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
14S	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
18S	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
22S	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5
26S	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.2	0.2	0.3	0.3	0.5	0.5	0.5	0.4	0.5	0.5	0.5
30S	0.5	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5
34S	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5
38S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
42S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
46S	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6
50S	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
54S	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7
58S	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8
62S	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
66S	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
70S	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.9	0.8
74S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7
78S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6
82S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
86S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
90S	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5

TABLE 5-3 (DJF) PLANETARY ALBEDO (FRACTIONS)

	180W	175W	170W	165W	160W	155W	150W	145W	140W	135W	130W	125W	120W	115W	110W	105W	100W	95W
90N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
86N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
82N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
78N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
74N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
70N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
66N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
62N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
58N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
54N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
50N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
46N	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****
42N	0.40	0.39	0.38	0.37	0.36	0.35	0.36	0.38	0.40	0.41	0.45	0.50	0.53	0.54	0.55	0.55	0.55	0.55
38N	0.38	0.37	0.37	0.37	0.36	0.34	0.34	0.35	0.36	0.39	0.40	0.43	0.44	0.45	0.45	0.45	0.45	0.45
34N	0.35	0.35	0.36	0.36	0.35	0.31	0.32	0.32	0.34	0.35	0.35	0.36	0.35	0.35	0.35	0.35	0.35	0.35
30N	0.33	0.34	0.33	0.34	0.30	0.28	0.29	0.30	0.31	0.33	0.32	0.32	0.31	0.30	0.30	0.31	0.31	0.32
26N	0.30	0.31	0.30	0.30	0.27	0.25	0.26	0.28	0.29	0.30	0.30	0.30	0.28	0.25	0.26	0.27	0.29	0.30
22N	0.27	0.27	0.27	0.26	0.25	0.24	0.25	0.25	0.27	0.28	0.28	0.27	0.26	0.25	0.25	0.25	0.27	0.28
18N	0.24	0.24	0.24	0.24	0.24	0.23	0.24	0.24	0.25	0.26	0.26	0.26	0.25	0.24	0.24	0.24	0.25	0.27
14N	0.23	0.23	0.22	0.22	0.22	0.23	0.23	0.23	0.24	0.25	0.25	0.26	0.25	0.24	0.24	0.24	0.25	0.26
10N	0.22	0.21	0.21	0.20	0.21	0.22	0.22	0.23	0.24	0.25	0.26	0.27	0.26	0.25	0.25	0.25	0.24	0.25
6N	0.22	0.20	0.20	0.20	0.20	0.21	0.21	0.23	0.25	0.25	0.27	0.27	0.27	0.26	0.27	0.26	0.25	0.24
2N	0.22	0.21	0.20	0.20	0.20	0.20	0.20	0.22	0.24	0.25	0.25	0.26	0.26	0.26	0.27	0.26	0.25	0.24
2S	0.21	0.21	0.21	0.20	0.19	0.17	0.19	0.20	0.20	0.21	0.22	0.24	0.24	0.25	0.25	0.25	0.24	0.24
6S	0.20	0.20	0.21	0.21	0.20	0.18	0.18	0.19	0.19	0.20	0.21	0.22	0.23	0.24	0.24	0.24	0.24	0.23
10S	0.19	0.20	0.20	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.22	0.22	0.23	0.23	0.24	0.23	0.23	0.23
14S	0.18	0.20	0.20	0.22	0.23	0.22	0.20	0.20	0.21	0.22	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.22
18S	0.18	0.20	0.20	0.22	0.24	0.25	0.20	0.20	0.22	0.23	0.24	0.24	0.24	0.23	0.23	0.22	0.22	0.21
22S	0.19	0.20	0.21	0.23	0.24	0.25	0.23	0.21	0.24	0.25	0.25	0.25	0.24	0.24	0.22	0.21	0.21	0.20
26S	0.20	0.20	0.22	0.24	0.25	0.26	0.25	0.24	0.25	0.26	0.26	0.26	0.25	0.24	0.22	0.20	0.20	0.19
30S	0.22	0.22	0.24	0.25	0.26	0.27	0.26	0.25	0.26	0.27	0.27	0.27	0.26	0.25	0.23	0.22	0.21	0.21
34S	0.24	0.24	0.25	0.27	0.28	0.28	0.28	0.27	0.28	0.28	0.28	0.28	0.27	0.26	0.25	0.25	0.23	0.23
38S	0.25	0.25	0.28	0.30	0.29	0.29	0.29	0.29	0.29	0.30	0.29	0.29	0.29	0.28	0.27	0.26	0.25	0.24
42S	0.28	0.29	0.30	0.33	0.32	0.30	0.30	0.31	0.31	0.32	0.31	0.30	0.30	0.30	0.30	0.30	0.28	0.26
46S	0.30	0.31	0.34	0.35	0.35	0.34	0.34	0.34	0.34	0.34	0.33	0.33	0.32	0.32	0.32	0.32	0.30	0.29
50S	0.34	0.35	0.36	0.38	0.37	0.36	0.36	0.36	0.36	0.36	0.36	0.35	0.35	0.35	0.35	0.35	0.33	0.32
54S	0.37	0.38	0.39	0.40	0.40	0.40	0.40	0.39	0.39	0.39	0.38	0.38	0.38	0.37	0.37	0.37	0.36	0.35
58S	0.40	0.40	0.41	0.43	0.43	0.43	0.42	0.41	0.41	0.41	0.41	0.41	0.40	0.39	0.39	0.39	0.39	0.38
62S	0.43	0.43	0.44	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.45	0.43	0.42	0.42	0.42	0.42	0.41
66S	0.46	0.45	0.47	0.48	0.49	0.50	0.49	0.48	0.48	0.48	0.48	0.48	0.46	0.45	0.45	0.45	0.45	0.45
70S	0.49	0.48	0.49	0.50	0.51	0.52	0.52	0.52	0.52	0.52	0.53	0.54	0.52	0.50	0.50	0.50	0.50	0.51
74S	0.50	0.50	0.51	0.53	0.55	0.55	0.55	0.55	0.55	0.55	0.56	0.58	0.57	0.55	0.55	0.55	0.55	0.56
78S	****	****	****	0.55	0.57	0.58	****	****	****	****	0.59	0.60	0.59	****	****	****	****	****
82S	****	****	****	0.58	0.59	0.60	****	****	****	****	****	0.59	****	****	****	****	****	****
86S	****	****	****	0.60	****	****	****	****	****	****	****	****	****	****	****	****	****	****
90S	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****

TABLE 5-3 (DJF) PLANETARY ALBEDO (FRACTIONS)

	90W	85W	80W	75W	70W	65W	60W	55W	50W	45W	40W	35W	30W	25W	20W	15W	10W	5W
90N																		
86N																		
8:N																		
78N																		
74N																		
70N																		
66N																		
62N																		
58N																		
54N																		
50N																		
46N		0.60																
42N	0.55	0.55	0.54	0.53	0.52	0.51	0.50	0.50	0.50	0.49	0.49	0.49	0.46	0.45	0.44	0.44	0.43	0.43
38N	0.45	0.46	0.46	0.46	0.46	0.45	0.45	0.45	0.44	0.43	0.45	0.46	0.44	0.40	0.40	0.40	0.40	0.39
34N	0.38	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.39	0.38	0.40	0.42	0.40	0.37	0.36	0.35	0.35	0.35
30N	0.34	0.35	0.35	0.36	0.35	0.35	0.35	0.36	0.35	0.35	0.35	0.38	0.35	0.33	0.32	0.30	0.32	0.33
26N	0.30	0.32	0.32	0.33	0.32	0.30	0.32	0.33	0.32	0.32	0.33	0.35	0.32	0.30	0.28	0.26	0.30	0.31
22N	0.28	0.29	0.29	0.28	0.28	0.28	0.28	0.29	0.29	0.29	0.30	0.30	0.28	0.27	0.25	0.24	0.25	0.30
18N	0.27	0.26	0.26	0.25	0.25	0.26	0.26	0.26	0.25	0.25	0.27	0.28	0.26	0.25	0.24	0.23	0.24	0.25
14N	0.25	0.25	0.23	0.21	0.22	0.24	0.24	0.24	0.24	0.24	0.25	0.27	0.25	0.23	0.23	0.22	0.23	0.25
10N	0.24	0.24	0.22	0.22	0.22	0.23	0.23	0.23	0.22	0.22	0.23	0.25	0.24	0.22	0.21	0.21	0.22	0.24
6N	0.23	0.23	0.23	0.23	0.23	0.24	0.24	0.23	0.21	0.20	0.21	0.24	0.22	0.21	0.20	0.20	0.21	0.23
2N	0.23	0.23	0.24	0.25	0.25	0.25	0.25	0.24	0.23	0.21	0.20	0.22	0.21	0.20	0.19	0.19	0.20	0.22
2S	0.23	0.24	0.24	0.25	0.26	0.26	0.26	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.19	0.20	0.21
6S	0.23	0.24	0.25	0.26	0.27	0.28	0.28	0.28	0.27	0.26	0.25	0.23	0.20	0.19	0.18	0.18	0.20	0.21
10S	0.23	0.24	0.25	0.26	0.28	0.29	0.30	0.30	0.29	0.27	0.26	0.25	0.22	0.20	0.18	0.19	0.20	0.22
14S	0.22	0.23	0.25	0.27	0.29	0.30	0.31	0.32	0.30	0.28	0.27	0.25	0.22	0.20	0.19	0.19	0.20	0.23
18S	0.21	0.22	0.24	0.27	0.28	0.30	0.31	0.32	0.30	0.28	0.27	0.26	0.23	0.20	0.19	0.20	0.21	0.24
22S	0.20	0.20	0.23	0.26	0.27	0.29	0.30	0.30	0.30	0.28	0.27	0.26	0.24	0.21	0.20	0.20	0.22	0.24
26S	0.19	0.20	0.23	0.26	0.27	0.28	0.29	0.29	0.29	0.27	0.27	0.26	0.25	0.23	0.22	0.21	0.22	0.25
30S	0.21	0.22	0.25	0.26	0.27	0.27	0.28	0.28	0.28	0.27	0.27	0.27	0.26	0.25	0.24	0.23	0.24	0.25
34S	0.23	0.25	0.26	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.27	0.26	0.25	0.26	0.27
38S	0.25	0.26	0.28	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.29	0.28	0.29	0.29
42S	0.27	0.28	0.30	0.31	0.30	0.30	0.29	0.29	0.30	0.30	0.31	0.31	0.32	0.33	0.32	0.31	0.31	0.32
46S	0.29	0.30	0.31	0.33	0.32	0.31	0.31	0.30	0.32	0.33	0.33	0.34	0.35	0.35	0.35	0.34	0.35	0.35
50S	0.32	0.32	0.33	0.35	0.34	0.33	0.33	0.33	0.35	0.35	0.36	0.37	0.38	0.40	0.39	0.38	0.38	0.38
54S	0.35	0.35	0.35	0.36	0.35	0.34	0.35	0.35	0.37	0.38	0.39	0.39	0.40	0.41	0.41	0.40	0.40	0.40
58S	0.38	0.37	0.38	0.40	0.39	0.38	0.39	0.40	0.40	0.42	0.42	0.42	0.43	0.44	0.43	0.42	0.42	0.42
62S	0.40	0.40	0.41	0.43	0.43	0.43	0.45	0.45	0.45	0.45	0.45	0.45	0.46	0.46	0.45	0.44	0.43	0.43
66S	0.45	0.45	0.45	0.47	0.48	0.44	0.50	0.50	0.50	0.50	0.50	0.50	0.49	0.48	0.48	0.45	0.45	0.45
70S	0.51	0.51	0.52	0.53	0.53	0.54	0.54	0.54	0.54	0.53	0.53	0.52	0.52	0.51	0.50	0.50	0.50	0.50
74S	0.56	0.56	0.56	0.56	0.56						0.55	0.55	0.55	0.53	0.53	0.54	0.55	0.55
78S														0.55	0.55			
82S																		
86S																		
90S																		

TABLE 5-3 (DJF) PLANETARY ALBEDO (FRACTIONS)

	0E	5E	10E	15E	20E	25E	30E	35E	40E	45E	50E	55E	60E	65E	70E	75E	80E	85E
90N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
86N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
82N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
78N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
74N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
70N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
66N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
62N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
58N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
54N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
50N	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
46N	*****	*****	*****	*****	0.50	*****	0.50	0.50	0.50	*****	0.51	*****	0.56	*****	0.60	0.61	0.58	0.55
42N	0.43	0.44	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.46	0.47	0.50	0.50	0.53	0.55	0.55	0.53	0.50
38N	0.38	0.37	0.38	0.38	0.38	0.39	0.40	0.40	0.42	0.43	0.43	0.43	0.45	0.45	0.47	0.48	0.47	0.45
34N	0.35	0.34	0.33	0.33	0.33	0.34	0.35	0.37	0.38	0.40	0.39	0.38	0.44	0.40	0.40	0.40	0.40	0.40
30N	0.33	0.33	0.32	0.32	0.32	0.33	0.34	0.34	0.35	0.35	0.35	0.35	0.35	0.34	0.35	0.35	0.35	0.35
26N	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.32	0.32	0.30	0.29	0.29	0.30	0.30	0.30
22N	0.31	0.31	0.31	0.30	0.31	0.31	0.30	0.30	0.29	0.28	0.29	0.29	0.27	0.25	0.26	0.27	0.27	0.27
18N	0.30	0.30	0.29	0.29	0.30	0.30	0.29	0.29	0.27	0.27	0.26	0.25	0.25	0.24	0.24	0.25	0.25	0.25
14N	0.28	0.28	0.28	0.28	0.29	0.29	0.28	0.28	0.27	0.25	0.25	0.24	0.24	0.23	0.24	0.25	0.24	0.23
10N	0.26	0.26	0.26	0.27	0.28	0.28	0.28	0.27	0.26	0.25	0.23	0.22	0.23	0.24	0.25	0.27	0.26	0.25
6N	0.25	0.25	0.25	0.26	0.27	0.27	0.27	0.27	0.26	0.25	0.22	0.21	0.23	0.25	0.27	0.30	0.29	0.27
2N	0.24	0.25	0.25	0.26	0.27	0.27	0.27	0.27	0.26	0.25	0.22	0.21	0.24	0.26	0.29	0.30	0.29	0.27
2S	0.23	0.24	0.25	0.26	0.27	0.27	0.27	0.27	0.26	0.25	0.22	0.22	0.24	0.26	0.27	0.28	0.27	0.27
6S	0.23	0.24	0.25	0.26	0.27	0.27	0.28	0.28	0.27	0.25	0.22	0.23	0.24	0.25	0.25	0.25	0.25	0.26
10S	0.24	0.25	0.25	0.26	0.27	0.28	0.29	0.29	0.27	0.25	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.24
14S	0.24	0.26	0.26	0.27	0.28	0.28	0.30	0.30	0.28	0.25	0.24	0.23	0.22	0.21	0.22	0.23	0.22	0.22
18S	0.25	0.26	0.27	0.26	0.27	0.28	0.29	0.30	0.28	0.26	0.25	0.24	0.22	0.21	0.22	0.22	0.22	0.21
22S	0.26	0.25	0.26	0.25	0.26	0.27	0.28	0.29	0.28	0.27	0.26	0.25	0.24	0.22	0.23	0.23	0.23	0.22
26S	0.26	0.25	0.25	0.24	0.25	0.26	0.27	0.28	0.27	0.27	0.27	0.26	0.25	0.24	0.24	0.24	0.24	0.23
30S	0.26	0.26	0.26	0.25	0.26	0.27	0.28	0.28	0.28	0.28	0.28	0.28	0.27	0.25	0.25	0.25	0.25	0.25
34S	0.27	0.28	0.28	0.27	0.27	0.28	0.29	0.29	0.29	0.30	0.29	0.29	0.28	0.27	0.27	0.27	0.28	0.28
38S	0.29	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.31	0.31	0.31	0.30	0.30	0.29	0.29	0.30	0.30	0.31
42S	0.32	0.31	0.32	0.32	0.31	0.30	0.32	0.33	0.33	0.33	0.34	0.35	0.33	0.32	0.32	0.32	0.33	0.34
46S	0.35	0.34	0.35	0.36	0.35	0.34	0.35	0.35	0.35	0.35	0.36	0.36	0.36	0.35	0.35	0.35	0.35	0.36
50S	0.38	0.36	0.37	0.38	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.38	0.37	0.37	0.37	0.37	0.38
54S	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.40	0.40	0.40
58S	0.42	0.41	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.40	0.41	0.42	0.43	0.43	0.43	0.42	0.42	0.43
62S	0.43	0.43	0.43	0.44	0.44	0.44	0.44	0.45	0.45	0.45	0.45	0.46	0.46	0.46	0.45	0.45	0.46	0.46
66S	0.45	0.45	0.45	0.45	0.46	0.46	0.48	0.50	0.50	0.50	0.50	0.51	0.51	0.50	0.50	0.50	0.50	0.50
70S	0.50	0.50	0.50	0.50	0.50	0.51	0.52	0.53	0.54	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
74S	0.55	0.55	0.55	0.55	0.55	0.56	0.56	0.57	0.59	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60
78S	*****	*****	*****	*****	*****	*****	0.57	0.58	0.60	*****	*****	*****	*****	*****	*****	*****	*****	*****
82S	*****	*****	*****	*****	*****	*****	*****	0.59	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
86S	*****	*****	*****	*****	*****	*****	*****	0.60	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
90S	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****

TABLE 5-3 (OJF) PLANETARY ALBEDO (FRACTIONS)

	90E	95E	100E	105E	110E	115E	120E	125E	130E	135E	140E	145E	150E	155E	160E	165E	170E	175E
90N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
86N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
82N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
78N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
74N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
70N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
66N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
62N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
58N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
54N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
50N	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
46N	***	***	***	***	***	***	0.50	***	***	***	***	***	***	***	***	***	***	***
42N	***	***	***	0.42	0.45	C.50	0.45	0.43	0.40	0.40	0.44	0.52	0.48	0.45	0.45	0.44	0.45	0.45
38N	***	***	0.38	0.39	0.41	0.45	0.42	0.40	0.39	0.38	0.39	0.45	0.44	0.43	0.42	0.41	0.40	0.40
34N	0.37	0.35	0.35	0.36	0.39	0.42	0.39	0.37	0.37	0.37	0.38	0.40	0.40	0.40	0.40	0.37	0.37	0.37
30N	0.33	0.30	0.32	0.34	0.37	0.40	0.37	0.35	0.36	0.36	0.36	0.35	0.35	0.35	0.35	0.33	0.33	0.33
26N	0.29	0.28	0.29	0.31	0.35	0.37	0.35	0.32	0.34	0.35	0.35	0.30	0.30	0.30	0.30	0.28	0.29	0.30
22N	0.25	0.25	0.27	0.29	0.3C	0.33	0.30	0.30	0.30	0.31	0.29	0.27	0.27	0.27	0.26	0.25	0.25	0.27
18N	0.23	0.22	0.25	0.27	0.27	0.28	0.26	0.26	0.26	0.26	0.25	0.25	C.25	0.25	0.24	0.24	0.24	0.24
14N	0.21	0.19	0.23	0.25	0.25	0.24	0.24	0.24	0.23	0.23	0.23	0.23	0.23	0.24	0.24	0.24	0.23	0.23
10N	0.23	0.2C	0.24	0.26	0.26	0.25	0.25	0.25	0.24	0.22	0.22	0.23	0.24	0.25	0.25	0.25	0.24	0.23
6N	0.25	0.22	0.25	0.27	0.27	0.27	0.27	0.26	0.25	0.23	0.23	0.25	0.25	0.26	0.25	0.25	0.25	0.23
2N	0.26	0.24	0.26	0.27	0.28	0.28	0.28	0.27	0.26	0.24	0.24	0.26	0.26	0.27	0.26	0.26	0.25	0.23
2S	0.27	0.26	0.27	0.28	0.29	0.30	0.30	0.28	0.26	0.25	0.25	0.27	0.26	0.26	0.26	0.25	0.24	0.22
6S	0.26	0.26	0.27	0.28	0.30	0.32	0.30	0.28	0.27	0.25	0.26	0.28	0.27	0.25	0.25	0.24	0.22	0.20
10S	0.25	0.25	0.25	0.26	0.27	0.30	0.28	0.28	0.27	0.26	0.27	0.29	0.27	0.25	0.23	0.22	0.20	0.19
14S	0.23	0.24	0.24	0.25	0.25	0.25	0.26	0.27	0.27	0.27	0.28	0.30	0.27	0.24	0.22	0.21	0.20	0.18
18S	0.22	0.23	0.23	0.24	0.24	0.25	0.25	0.26	0.27	0.28	0.29	0.30	0.27	0.24	0.22	0.20	0.19	0.18
22S	0.23	0.23	0.23	0.23	0.23	0.24	0.25	0.25	0.26	0.28	0.28	0.27	0.25	0.23	0.22	0.20	0.19	0.19
26S	0.24	0.24	0.24	0.24	0.23	0.24	0.24	0.25	0.26	0.27	0.27	0.26	0.25	0.24	0.22	0.20	0.20	0.20
30S	0.25	0.26	0.25	0.25	0.24	0.24	0.25	0.27	0.27	0.28	0.28	0.27	0.26	0.25	0.25	0.25	0.23	0.22
34S	0.28	0.28	0.28	0.27	0.25	0.25	0.27	0.28	0.28	0.29	0.29	0.28	0.28	0.27	0.29	0.30	0.26	0.24
38S	0.31	0.31	0.30	0.29	0.28	0.27	0.30	0.30	0.30	0.30	0.30	0.29	0.29	0.29	0.31	0.32	0.30	0.25
42S	0.34	0.35	0.33	0.32	0.32	0.32	0.33	0.34	0.33	0.33	0.32	0.31	0.31	0.31	0.33	0.33	0.32	0.28
46S	0.37	0.36	0.36	0.35	0.35	0.35	0.36	0.36	0.35	0.35	0.35	0.34	0.34	0.34	0.35	0.35	0.34	0.31
50S	0.38	0.38	0.37	0.36	0.37	0.37	0.38	0.39	0.38	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.36	0.34
54S	0.40	0.39	0.39	0.39	0.39	0.40	0.41	0.42	0.42	0.40	0.40	0.41	0.41	0.40	0.40	0.38	0.38	0.36
58S	0.42	0.42	0.41	0.41	0.42	0.43	0.44	0.45	0.45	0.44	0.44	0.45	0.44	0.44	0.42	0.40	0.40	0.40
62S	0.46	0.46	0.46	0.45	0.46	0.47	0.47	0.48	0.48	0.47	0.48	0.48	0.47	0.47	0.45	0.43	0.43	0.43
66S	0.50	0.50	0.50	0.50	0.50	0.51	0.51	0.51	0.51	0.51	0.52	0.52	0.50	0.50	0.49	0.46	0.47	0.47
70S	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.54	0.53	0.52	0.50	0.50	0.50
74S	0.60	0.60	0.60	0.60	0.60	0.60	0.57	***	***	***	***	***	***	***	0.55	0.55	0.54	0.53
78S	***	***	***	***	***	0.60	0.58	***	***	***	***	***	***	***	***	***	***	***
82S	***	***	***	***	***	0.60	0.59	***	***	***	***	***	***	***	***	***	***	***
86S	***	***	***	***	***	***	0.60	***	***	***	***	***	***	***	***	***	***	***
90S	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

TABLE 5-4 (DJF) LONGWAVE RADIATION (100 LY/DAY)

	180W	175W	170W	165W	160W	155W	150W	145W	140W	135W	130W	125W	120W	115W	110W	105W	100W	95W
90N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
86N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
82N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
78N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
74N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
70N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
66N	*	*	*	*	*	3.46	3.46	*	*	*	*	*	*	*	*	*	*	*
62N	*	*	*	*	*	3.60	3.60	3.46	3.46	3.46	3.46	*	*	*	*	*	*	*
58N	*	*	3.89	3.89	3.89	3.74	3.74	3.74	3.60	3.60	3.60	3.46	3.46	3.46	3.46	3.46	3.46	*
54N	3.89	3.89	3.89	4.03	4.03	3.89	3.89	3.89	3.89	3.74	3.74	3.60	3.60	3.60	3.60	3.60	3.60	3.46
50N	4.03	4.03	4.03	4.18	4.18	4.18	4.03	4.03	4.03	3.89	3.89	3.74	3.74	3.74	3.74	3.74	3.74	3.60
46N	4.18	4.18	4.18	4.32	4.32	4.32	4.18	4.18	4.18	4.18	4.03	3.89	3.89	3.89	3.89	3.89	3.89	3.74
42N	4.32	4.32	4.32	4.46	4.46	4.46	4.32	4.32	4.32	4.32	4.18	4.18	4.18	4.18	4.18	4.18	4.03	4.03
38N	4.46	4.46	4.46	4.61	4.61	4.61	4.46	4.46	4.46	4.46	4.46	4.46	4.32	4.32	4.32	4.32	4.32	4.32
34N	4.61	4.61	4.61	4.75	4.75	4.75	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61
30N	4.90	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.90	4.75	4.90	4.75	4.75	4.75	4.75	4.75
26N	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.04	5.04	5.04	5.04	5.18	5.18	5.18	5.18
22N	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
18N	5.47	5.47	5.62	5.62	5.62	5.47	5.47	5.33	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
14N	5.47	5.62	5.62	5.76	5.62	5.62	5.62	5.47	5.47	5.33	5.33	5.18	5.33	5.33	5.33	5.33	5.33	5.33
10N	5.47	5.47	5.62	5.62	5.62	5.47	5.47	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33
6N	5.33	5.47	5.47	5.47	5.47	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.47
2N	5.18	5.33	5.33	5.33	5.47	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.47	5.47	5.47
2S	5.18	5.18	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.47	5.47	5.62
6S	5.18	5.18	5.18	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.47	5.47	5.62	5.62
10S	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.33	5.33	5.33	5.47	5.47	5.62	5.62	5.76
14S	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.33	5.33	5.47	5.62	5.62	5.76	5.76
18S	5.18	5.18	5.18	5.04	5.04	5.18	5.18	5.04	5.04	5.04	5.18	5.18	5.33	5.47	5.47	5.62	5.62	5.76
22S	5.33	5.18	5.18	5.04	5.04	5.04	5.04	5.04	4.90	4.90	5.18	5.18	5.33	5.33	5.47	5.47	5.62	5.62
26S	5.33	5.18	5.18	5.04	5.04	5.04	5.04	5.04	4.90	4.90	5.04	5.18	5.18	5.33	5.33	5.47	5.62	5.62
30S	5.33	5.18	5.18	5.18	5.04	5.04	5.04	5.04	4.90	4.90	5.04	5.04	5.18	5.18	5.33	5.33	5.47	5.47
34S	5.18	5.18	5.18	5.18	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.18	5.18	5.18	5.18	5.33	5.33
38S	5.18	5.18	5.04	5.04	4.90	4.90	4.90	5.04	5.04	5.04	5.04	4.90	5.04	5.04	5.04	5.18	5.18	5.18
42S	5.04	5.04	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	5.04	5.04
46S	4.90	4.90	4.75	4.75	4.75	4.75	4.75	4.90	4.75	4.75	4.75	4.75	4.75	4.90	4.75	4.75	4.90	4.90
50S	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.61	4.61	4.75	4.75
54S	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.46	4.46	4.46	4.61
58S	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.46	4.32	4.32	4.32	4.46
62S	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.32	4.32	4.32	4.46
66S	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
70S	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.46	4.46	4.46	4.46	4.32
74S	*	*	*	*	*	*	*	*	*	*	*	*	4.32	4.32	4.32	4.32	4.32	*
78S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
82S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
86S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
90S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

TABLE 5-4 (OJF) LONGWAVE RADIATION (100 LY/DAY)

	90W	85W	80W	75W	70W	65W	60W	55W	50W	45W	40W	35W	30W	25W	20W	15W	10W	5W
90N																		
86N										3.02						3.02	3.02	3.02
82N								3.02	3.02	3.02						3.02	3.17	3.17
78N							3.02	3.02	3.02	3.17						3.17	3.31	3.31
74N						3.02	3.02	3.17	3.17	3.17						3.31	3.46	3.46
70N						3.17	3.17	3.17	3.17	3.31					3.46	3.46	3.46	3.60
66N						3.31	3.31	3.31	3.31	3.46	3.46	3.46	3.46	3.60	3.60	3.60	3.60	3.74
62N						3.46	3.46	3.46	3.46	3.46	3.60	3.60	3.74	3.74	3.74	3.74	3.74	3.74
58N					3.46	3.46	3.60	3.60	3.60	3.74	3.74	3.89	3.89	3.89	3.89	3.89	3.89	3.89
54N	3.46	3.46	3.46	3.46	3.60	3.60	3.74	3.74	3.74	3.89	3.89	4.03	4.03	4.03	4.03	4.03	4.03	4.03
50N	3.60	3.60	3.60	3.60	3.74	3.74	3.89	3.89	4.03	4.03	4.03	4.18	4.18	4.18	4.18	4.18	4.18	4.18
46N	3.74	3.74	3.74	3.74	3.89	3.89	4.03	4.18	4.18	4.18	4.18	4.32	4.32	4.32	4.32	4.18	4.32	4.32
42N	4.03	4.03	4.03	4.03	4.03	4.03	4.18	4.32	4.32	4.32	4.46	4.46	4.46	4.46	4.32	4.32	4.46	4.46
38N	4.32	4.32	4.32	4.32	4.32	4.32	4.46	4.61	4.61	4.61	4.61	4.61	4.61	4.46	4.46	4.46	4.61	4.61
34N	4.61	4.61	4.46	4.46	4.46	4.46	4.61	4.75	4.75	4.75	4.75	4.75	4.61	4.61	4.61	4.61	4.75	4.75
30N	4.75	4.75	4.75	4.75	4.61	4.61	4.75	4.90	5.04	4.90	4.90	4.90	4.75	4.75	4.75	4.90	4.90	5.04
26N	5.18	5.18	5.04	4.90	4.75	4.75	4.90	5.18	5.18	5.18	5.04	5.04	4.90	4.90	4.90	5.04	5.18	5.18
22N	5.18	5.18	5.18	5.18	5.04	5.04	5.18	5.18	5.18	5.18	5.18	5.18	5.04	5.04	5.18	5.18	5.18	5.18
18N	5.18	5.18	5.18	5.18	5.33	5.18	5.33	5.33	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.33	5.33	5.33
14N	5.33	5.33	5.33	5.33	5.47	5.33	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.47	5.47
10N	5.33	5.33	5.33	5.47	5.62	5.47	5.62	5.47	5.47	5.33	5.33	5.33	5.47	5.47	5.47	5.47	5.47	5.47
6N	5.33	5.33	5.33	5.47	5.62	5.62	5.62	5.47	5.33	5.33	5.33	5.33	5.47	5.47	5.62	5.62	5.62	5.47
2N	5.47	5.47	5.47	5.47	5.62	5.62	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.62	5.62	5.62	5.47
2S	5.47	5.47	5.47	5.47	5.47	5.47	5.33	5.18	5.18	5.18	5.33	5.33	5.33	5.47	5.62	5.62	5.62	5.47
6S	5.62	5.47	5.47	5.33	5.47	5.33	5.18	5.18	5.18	5.18	5.18	5.33	5.33	5.47	5.47	5.47	5.47	5.47
10S	5.62	5.62	5.47	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.33	5.47	5.47	5.47	5.33
14S	5.76	5.62	5.47	5.33	5.18	5.18	5.18	5.04	5.04	5.04	5.18	5.18	5.18	5.33	5.33	5.33	5.33	5.33
18S	5.62	5.62	5.47	5.33	5.18	5.18	5.04	5.04	5.04	5.04	5.04	5.18	5.18	5.33	5.47	5.47	5.47	5.33
22S	5.62	5.47	5.62	5.62	5.47	5.18	5.18	5.18	5.04	5.04	5.04	5.18	5.18	5.33	5.47	5.47	5.47	5.33
26S	5.47	5.62	5.62	5.76	5.47	5.33	5.18	5.18	5.04	5.04	5.04	5.18	5.18	5.18	5.47	5.47	5.47	5.33
30S	5.47	5.47	5.62	5.62	5.47	5.33	5.18	5.18	5.04	4.90	4.90	4.90	5.04	5.18	5.33	5.33	5.33	5.18
34S	5.33	5.33	5.47	5.47	5.47	5.33	5.18	5.18	5.04	4.90	4.90	4.90	4.90	5.04	5.04	5.18	5.18	5.04
38S	5.18	5.18	5.33	5.33	5.33	5.33	5.18	5.18	5.04	4.90	4.90	4.90	4.90	4.90	4.90	5.04	5.04	4.90
42S	5.04	5.18	5.18	5.18	5.18	5.18	5.18	5.04	4.90	4.90	4.90	4.90	4.90	4.75	4.75	4.90	4.90	4.90
46S	4.90	5.04	5.04	5.18	5.18	5.18	5.04	4.90	4.90	4.90	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
50S	4.75	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.75	4.75	4.75	4.75	4.75	4.61	4.61	4.75	4.75	4.75
54S	4.61	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.61	4.61	4.61	4.61	4.61	4.61	4.61
58S	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.46	4.46	4.46	4.46	4.46	4.46	4.46
62S	4.46	4.61	4.61	4.46	4.46	4.46	4.46	4.61	4.61	4.61	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
66S	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.32	4.32	4.32	4.32	4.32	4.32	4.32
70S	4.46	4.46	4.46	4.32	4.32	4.32	4.32	4.46	4.46	4.46	4.32	4.32						4.32
74S	4.32	4.32	4.32				4.32	4.32	4.32	4.32								
78S																		
82S																		
86S																		
90S																		

TABLE 5-4 (CJF) LONGWAVE RADIATION (100 LY/DAY)

	0E	5E	10E	15E	20E	25E	30E	35E	40E	45E	50E	55E	60E	65E	70E	75E	80E	85E
90N																		
86N	3.02			3.02	3.02	3.02										3.02	3.02	3.02
82N	3.17			3.17	3.17	3.17										3.02	3.02	3.02
78N	3.31			3.31	3.31	3.31										3.17	3.17	3.17
74N	3.46	3.46	3.46	3.46	3.46	3.46										3.17	3.17	3.17
70N	3.60	3.60	3.60	3.60	3.46	3.46										3.31	3.31	3.31
66N	3.74	3.74	3.74	3.74	3.60	3.60	3.46	3.46	3.46	3.46						3.31	3.31	3.31
62N	3.74	3.89	3.89	3.89	3.74	3.74	3.60	3.60	3.60	3.60	3.46					3.46	3.46	3.46
58N	3.89	3.89	3.89	3.89	3.89	3.89	3.74	3.74	3.74	3.74	3.60	3.46	3.46	3.46	3.46	3.45	3.46	3.46
54N	4.03	4.03	4.03	4.03	4.03	3.89	3.89	3.89	3.89	3.89	3.74	3.60	3.60	3.60	3.60	3.60	3.60	3.60
50N	4.18	4.18	4.18	4.18	4.18	4.03	4.03	3.89	3.89	3.89	3.89	3.74	3.74	3.74	3.74	3.74	3.74	3.74
46N	4.32	4.32	4.32	4.32	4.32	4.18	4.18	4.03	4.03	4.03	4.03	3.89	3.89	3.89	3.89	3.89	3.89	3.89
42N	4.46	4.46	4.46	4.46	4.46	4.32	4.32	4.32	4.18	4.18	4.18	4.18	4.03	4.03	4.03	4.03	4.03	4.03
38N	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.46	4.46	4.32	4.32	4.32	4.32	4.32	4.18	4.18	4.18	4.18
34N	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.61	4.61	4.61	4.61	4.61	4.46	4.32	4.32	4.32
30N	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.75	4.75	4.75
26N	5.18	5.18	5.18	5.18	5.18	5.18	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
22N	5.18	5.18	5.33	5.33	5.33	5.47	5.47	5.47	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.47	5.33	5.33
18N	5.33	5.33	5.33	5.33	5.47	5.62	5.62	5.62	5.62	5.62	5.62	5.62	5.47	5.47	5.62	5.62	5.62	5.47
14N	5.33	5.33	5.33	5.33	5.47	5.62	5.62	5.62	5.76	5.76	5.62	5.62	5.47	5.47	5.62	5.62	5.62	5.47
10N	5.33	5.33	5.33	5.33	5.33	5.47	5.47	5.47	5.62	5.76	5.62	5.47	5.33	5.33	5.33	5.33	5.33	5.33
6N	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.33	5.47	5.47	5.33	5.33	5.18	5.18	5.18	5.18	5.04
2N	5.33	5.33	5.18	5.18	5.04	5.04	5.04	5.04	5.18	5.33	5.33	5.18	5.18	5.04	5.04	4.90	4.90	4.90
2S	5.33	5.33	5.18	5.04	4.90	4.90	4.90	4.90	5.04	5.18	5.18	5.04	5.04	5.04	4.90	4.75	4.75	4.75
6S	5.33	5.33	5.18	5.04	4.75	4.75	4.75	4.90	4.90	5.04	5.04	5.04	5.04	4.90	4.90	4.75	4.61	4.75
10S	5.33	5.33	5.18	5.04	4.90	4.90	4.90	4.90	4.90	4.90	5.04	5.04	5.04	4.90	4.90	4.90	4.90	4.90
14S	5.33	5.33	5.18	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.18	5.18	5.18	5.04	5.04	5.04	5.04	5.18
18S	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
22S	5.33	5.33	5.33	5.33	5.47	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.18	5.18	5.18	5.18	5.33	5.33
26S	5.33	5.33	5.33	5.47	5.47	5.62	5.62	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33
30S	5.18	5.33	5.33	5.47	5.47	5.62	5.47	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33
34S	5.18	5.18	5.18	5.33	5.33	5.33	5.33	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
38S	5.04	5.04	5.04	5.18	5.18	5.18	5.18	5.18	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04
42S	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.90	4.75	4.90	4.90	4.90	4.90	4.90	4.90
46S	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
50S	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61
54S	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.61
58S	4.61	4.61	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.32	4.32	4.32	4.32	4.32	4.46	4.46
62S	4.46	4.46	4.46	4.32	4.46	4.46	4.46	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32
66S	4.46	4.46	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
70S	4.32	4.32						4.18	4.18	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03
74S								4.03	4.03	3.89	3.89	3.89	3.89	4.03	4.03	4.03	3.89	3.89
78S								4.03	3.89					3.89	3.89	3.89		
82S								3.89	3.89									
86S								3.89										
90S																		

TABLE 5-4 (DJF) LONGWAVE RADIATION (100 LY/DAY)

	90E	95E	100E	105E	110E	115E	120E	125E	130E	135E	140E	145E	150E	155E	160E	165E	170E	175E
90N	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
86N	*	*	*	3.02	3.02	3.02	*	*	*	*	*	*	*	*	*	*	*	*
82N	*	*	*	3.02	3.02	3.02	*	*	*	*	*	*	*	*	*	*	*	*
78N	*	*	*	3.17	3.17	3.17	*	*	*	*	*	*	*	*	*	*	*	*
74N	*	*	*	3.17	3.17	3.17	*	*	*	*	*	*	*	*	*	*	*	*
70N	*	*	*	3.17	3.17	3.17	*	*	*	*	*	*	*	*	*	*	*	*
66N	*	*	*	3.31	3.31	3.31	*	*	*	*	*	*	*	*	*	*	3.46	*
62N	*	*	*	3.31	3.31	3.31	*	*	*	*	*	*	*	3.46	3.46	3.46	3.60	*
58N	*	*	*	3.46	3.46	3.46	*	*	*	*	3.46	3.46	3.60	3.60	3.60	3.74	3.74	*
54N	3.60	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.46	3.60	3.60	3.74	3.74	3.89	3.89	3.89	3.89
50N	3.74	3.60	3.60	3.60	3.60	3.74	3.74	3.74	3.74	3.74	3.74	3.74	3.89	3.89	4.03	4.03	4.03	4.03
46N	3.89	3.89	3.74	3.74	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	4.03	4.03	4.18	4.18	4.18	4.18
42N	4.03	4.03	3.89	3.89	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.18	4.18	4.18	4.32	4.32	4.32	4.32
38N	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.32	4.32	4.32	4.32	4.32	4.32	4.46	4.46	4.46	4.46
34N	4.32	4.32	4.32	4.32	4.32	4.46	4.46	4.46	4.46	4.61	4.61	4.61	4.61	4.61	4.61	4.75	4.75	4.75
30N	4.75	4.75	4.61	4.61	4.61	4.61	4.61	4.61	4.75	4.90	4.90	4.90	4.90	4.90	4.90	5.04	4.90	4.90
26N	5.04	5.04	4.90	4.75	4.90	4.90	4.90	4.90	4.90	5.04	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
22N	5.33	5.18	5.18	5.04	5.04	5.04	5.04	5.04	5.18	5.18	5.33	5.33	5.33	5.33	5.33	5.47	5.33	5.33
18N	5.47	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.33	5.33	5.33	5.33	5.47	5.47	5.62	5.62	5.62	5.62
14N	5.47	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.47	5.62	5.62	5.62	5.62
10N	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.33	5.33	5.18	5.33	5.33	5.33	5.33
6N	5.04	5.04	5.18	5.04	5.04	5.04	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.04	5.18	5.18	5.18
2N	4.90	4.90	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	4.90	4.90	5.04	5.18
2S	4.75	4.75	4.90	4.90	5.04	5.04	5.04	5.04	5.04	4.90	4.90	4.90	4.90	4.90	4.75	4.75	4.90	4.90
6S	4.75	4.75	4.90	5.04	5.04	5.04	5.04	5.04	5.04	4.90	4.75	4.75	4.75	4.90	4.75	4.75	4.90	4.90
10S	5.04	5.04	5.04	5.18	5.18	5.18	5.18	5.04	5.04	4.90	4.90	4.75	4.90	4.90	4.90	4.90	5.04	5.04
14S	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.18	5.18
18S	5.18	5.33	5.33	5.33	5.33	5.33	5.33	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18
22S	5.33	5.33	5.47	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.47	5.47	5.33	5.33	5.33	5.33	5.33	5.33
26S	5.33	5.33	5.47	5.47	5.47	5.33	5.33	5.33	5.47	5.47	5.62	5.76	5.62	5.47	5.33	5.18	5.33	5.33
30S	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.33	5.47	5.62	5.47	5.33	5.18	5.18	5.18	5.33
34S	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.33	5.33	5.33	5.33	5.18	5.18	5.04	5.18	5.18
38S	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.04	5.18	5.18	5.18	5.18	5.04	5.04	4.90	5.04	5.18
42S	4.90	4.75	4.75	4.75	4.90	4.90	4.90	4.90	4.90	4.90	4.90	5.04	5.04	4.90	4.90	4.90	4.90	5.04
46S	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.90
50S	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.75	4.75	4.75	4.75	4.75	4.75
54S	4.46	4.46	4.46	4.46	4.46	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.61	4.75
58S	4.46	4.46	4.46	4.32	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.61	4.61	4.61
62S	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.46	4.46	4.46	4.46
66S	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.32	4.32	*	*	4.32	4.46	4.46	4.46
70S	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.03	4.18	4.18	*	*	*	4.32	4.32	4.32
74S	*	*	3.89	3.89	3.89	3.89	3.89	3.89	3.89	3.89	4.03	4.03	*	*	*	*	*	*
78S	*	*	*	*	*	*	*	*	*	*	3.89	4.03	*	*	*	*	*	*
82S	*	*	*	*	*	*	*	*	*	*	*	3.89	*	*	*	*	*	*
86S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
90S	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

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